CLAIMS

1. A composition comprising a population of mammalian muscle progenitor cells derived from joint tissue, said cells having *in vivo* myogenic properties and providing a persistent pool of satellite cells when introduced into mammals.

2. A composition according to claim 1 wherein the cells are derived from synovial membrane.

3. A composition according to claim 1 or 2 wherein the cell population is characterised by the expression of one or more of the synovial fibroblast positive markers CD44 and CD90 and by the absence of the expression of the negative markers flk-1 or any marker coexpressed or co-detectable with these positive and/or negative markers.

4. The composition according to any of claims 1 to 3 further characterised by the expression of c-met as a positive marker or any marker coexpressed or co-detectable with this positive marker.

5. The composition according to any of claims 1 to 4 further characterised by the expression of gdf5/cdmp1 as a negative marker or any marker coexpressed or co-detectable with this negative marker.

6. The composition according to any of claims 1 to 5 further characterised by the expression of CD34 as a positive marker or any marker coexpressed or co-detectable with this positive marker.

7. The composition according to any of claims 1 to 6 wherein the cells are genetically engineered.

8. The composition of claim 7 wherein the genetically engineered cells comprise a promoter operably linked to a nucleotide sequence encoding a

protein selected from the group of an angiogenic factor, a peptide growth factor and an anti-angiogenic factor.

9. The composition according to any of claims 1 to 8 wherein the cells are clonal.

10. The composition according to any of claims 1 to 9 wherein the cells are cryopreserved.

11. The composition according to any of claims 1 to 10 wherein the cells are isolated and passaged between 3 and 10 passages.

12. A pharmaceutical composition comprising a composition of muscle progenitor cells according to any of claims 1 to 11 in admixture with at least one pharmaceutically acceptable carrier.

13. Use of a composition according to any of claims 1 to 11 for the manufacture of a medicament for the repair or prevention of a muscle dysfunction.

14. Use according to claim 13, wherein the muscle is skeletal muscle.

15. Use according to claim 13 or 14, wherein the dysfunction is caused by an ischemic event.

16. Use according to claim 13 or 14, wherein the dysfunction is selected from a severe trauma, a diffuse trauma and crush syndrome, disuse atrophy, sarcopenia.

17. Use according to claim 13 or 14, wherein the dysfunction is a muscular dystrophy.

18. Use according to claim 17, wherein the muscular dystrophy is Duchenne

Muscular Dystrophy.

19. Use according to claim 13 or 15, wherein the muscle is cardiac muscle.

20. Use according to claim 19 wherein the muscle dysfunction is a cardiovascular disorder selected from myocardial infarct and heart failure.

21. Use according to any of claims 13 to 20 wherein the composition is delivered locally.

22. Use according to any of claims 13 to 20 wherein the composition is delivered systemically.

23. Use of a composition according to any of claims 1 to 11 for the manufacture of a medicament for the restoration of Mechano Growth Factor expression by dystrophic muscle cells.

24. Use of a composition according to any of claims 1 to 11 for the manufacture of a medicament for the generation of a persistent population of satellite cells.

25. A method of regenerating muscle comprising of the step of administrating a composition according to claims 1 to 12 to an individual.

26. The method of claim 25 wherein the composition is injected into the affected muscle.

27. The method of claim 25 wherein the composition is administered into the blood stream.

28. A method of selecting muscle precursor cells comprising the step of simultaneously or subsequently contacting a joint tissue derived cell population with a binding substance for one or more of the positive and/or

negative markers selected from the group of CD90, CD44, CD34, c-Met and CDMP1 or any marker coexpressed or co-detectable with these positive and/or negative markers.

29. The method according to claim 28 wherein the joint tissue derived cell population is obtained from the synovial membrane.

30. The method of any of claims 27 to 29 wherein the binding substance is an antibody.

31. The method of claims any of claims 27 to 29 wherein the binding substance is a ligand for a receptor.

32. A method of restoring the capacity of dystrophic muscle cells to express MGF comprising the step of administering a composition according to any of claims 1 to 12 to an individual with dystrophic muscle.

33. A method of providing a persistent reserve population of satellite cells in an individual comprising the step of administering a composition according to any of claims 1 to 12 to an individual.

34. A vehicle for muscle specific delivery of therapeutic agents comprising the composition of claim 7 or 8.

35. The composition according to any of claims 1 to 12, said cells providing after administration to an individual a persistent pool of satellite cells which can contribute to the generation of new myonuclei during muscle regeneration.